

**West Sacramento GRR EIS/EIR  
Appendix C**

**Cultural Resources**

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**West Sacramento GRR EIS/EIR  
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**Cultural Resources**

**Enclosure 1**

**Final Programmatic Agreement**

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**PROGRAMMATIC AGREEMENT  
AMONG THE  
U.S. ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE  
WEST SACRAMENTO GENERAL REEVALUATION REPORT,  
YOLO COUNTY and SOLANO COUNTIES, CALIFORNIA**

**WHEREAS**, the United States Army Corps of Engineers, Sacramento District (Corps) is proceeding to implement aspects of the recommended plan in the West Sacramento General Reevaluation Report (GRR) Project (Project). The West Sacramento GRR project was authorized in the Water Resources Development Act 1992, Pub. L. No. 102-580, § 101(4), and the Energy and Water Development Appropriations Act of 1999, Pub. L. No. 105-245, 112 Stat. 1840 (1999) (project, as described in **Attachment 1: Description of the West Sacramento GRR and Projects**); and

**WHEREAS**, the Corps proposes to bring the 50 miles of perimeter levees surrounding West Sacramento into compliance with applicable Federal and State standards for levees protecting urban areas through implementing proposed levee improvements that would address adequate levee height, levee seepage, erosion, and stability conditions along the West Sacramento levee system located in Yolo and Solano Counties, California; and

**WHEREAS** the State of California Central Valley Flood Protection Board (CVFPB) is the non-Federal sponsor for the Project and the CVFPB has been invited to be a Concurring Party to this Programmatic Agreement (Agreement); and

**WHEREAS**, the Corps has determined that the Project activities constitute an Undertaking, as defined in 36 C.F.R. § 800.16(y), and therefore is subject to Section 106 of the National Historic Preservation Act of 1966, 54 U.S.C. § 306108 (NHPA); and

**WHEREAS**, pursuant to 36 C.F.R. § 800.4(b)(2), the Corps may implement the Project in phases as funding is available and construction authority is provided and, as a result, efforts to identify and evaluate Historic Properties and the determination of effects pursuant to 36 C.F.R. § 800.14(b)(1)(ii), for all phases and segments of the Project may be deferred until more specific project information for each phase is known; and

**WHEREAS**, the specific project design that may alter the levees will not be developed until after the Project has been approved for design, a determination of effect and, if necessary, an Historic Properties Treatment Plan (HPTP), cannot be developed until after approval and execution of this Agreement.

**WHEREAS**, this Agreement shall establish the process the Corps shall follow for compliance with 54 U.S.C. § 306108 (formerly 16 U.S.C. § 470f, referred to hereinafter as "Section 106"), taking into consideration the views of the Signatory and Concurring Parties; and

**WHEREAS**, a total of 14 historic properties are known to be present within the Area of Potential Effects (APE) and although extensive archaeological inventory has been completed within the APE under other projects, portions of the APE have not been inventoried; and

**WHEREAS**, the presence of levees, alluvial deposition, and other built environment features have obscured the presence of historic properties and a full assessment of archaeological sites cannot be made in advance of construction; and

**WHEREAS**, the levees of the Sacramento River are the one known potential Historic Property within the APE that will be affected by the Project; and

**WHEREAS**, the Corps is aware that there is a high probability for buried cultural resources that may not be identified prior to construction and that also may be eligible for inclusion in the NRHP, and therefore this Agreement documents a framework for managing post-review discoveries per 36 C.F.R. § 800.13; and

**WHEREAS**, in accordance with 36 C.F.R. §§ 800.2(c)(2)(ii)(A), 800.3(f)(2), and 800.14(b)(2)(i), the Corps has invited the Yocha Dehe Wintun Nation and United Auburn Indian Community to be concurring parties to this agreement and will continue to consult with them on its implementation; and

**WHEREAS**, the Corps shall make the terms and conditions of this Agreement part of the conditions of any contracts issued by the Corps for this Project; and

**WHEREAS**, the definitions set forth in 36 C.F.R. § 800.16 are incorporated herein by reference and apply throughout this Agreement; and

**WHEREAS**, the definitions for Signatory Parties set forth in 36 C.F.R. § 800.6(c)(1), and the definitions for Concurring Parties set forth in 36 C.F.R. § 800.6(c)(3), are incorporated herein by reference and apply throughout this Agreement; and

**WHEREAS**, in accordance with 36 C.F.R. § 800.14(b)(3), the Corps notified and invited the Advisory Council on Historic Preservation (ACHP) per 36 C.F.R. § 800.6(a)(1)(C) to participate in consultation to resolve potential adverse effects of the Project, including development of this Agreement, and the ACHP has declined to participate pursuant to 36 C.F.R. § 800.6(a)(1)(iii) in a letter dated August 7, 2012; and

**WHEREAS**, in accordance with 36 C.F.R. § 800.6(a)(4) and 36 C.F.R. § 800.14(b)(2)(ii), the Corps has notified the public of the Project and provided an opportunity for members of the public to comment on the Project and the Section 106 process as outlined in this Agreement; and

**NOW, THEREFORE**, the signatories agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on Historic Properties and to satisfy the Corps' Section 106 responsibilities for all individual aspects of the undertaking.

The Corps shall ensure that the following measures are carried out:

## **STIPULATIONS**

### **I. TIME FRAMES AND REVIEW PROCEDURES**

For all documents and deliverables produced in accordance with the stipulations of this Agreement, the Corps shall provide a draft document to the SHPO, Concurring Parties, and Native American interested parties and Tribes for review. Any written comments provided by the SHPO, Concurring Parties, and Native American interested parties and Tribes, within thirty (30) calendar days from the date of receipt, shall be considered in the revision of the document or deliverable. The Corps shall document and report the written comments received for the document or deliverable and how comments were addressed. The Corps shall provide a revised final document or deliverable to the SHPO for concurrence. The SHPO shall have thirty (30) calendar days to respond. Failure of the SHPO, Concurring Parties, and Native American interested parties and Tribes to respond within thirty (30) calendar days of any submittal shall not preclude Corps from moving to the next step in this Agreement.

Should the SHPO object to the final document or deliverable submitted for concurrence, the Corps and SHPO shall consult for a period not to exceed fifteen (15) calendar days following the receipt of the SHPO's written objection in an effort to come to agreement on the issues to which the SHPO has objected. Should the SHPO and the Corps be

unable to agree on the issues to which the SHPO has objected, the SHPO and the Corps shall proceed in accordance with **Stipulation XV (Dispute Resolution)**, below. The timeframe to consult to resolve a disagreement or objection may be extended by mutual consent of the Corps and the SHPO.

## II. AREA OF POTENTIAL EFFECTS

The APE for Project activities shall include the construction footprint of the activity and a reasonable buffer determined through consultation between SHPO and the Corps, and shall take into account the likelihood of direct and indirect effects to Historic Properties resulting from the Project. **Attachment 2** includes an overall APE map for the Project. Because the Project will occur in phases, it may be necessary to further define the APE for each phase as phases are authorized and funded for design and construction. Prior to activities under **Stipulation IV (Identification and Evaluation)**, the Corps shall submit to the SHPO, Concurring Parties, and Native American interested parties and Tribes a map of the APE for the current phase and a description of the Project activities occurring for that phase, in accordance with **Stipulation I (Timeframes and Review Procedures)**. Revisions to the APE will not necessitate modifications to this Agreement.

- A. For purposes of this Agreement, the APE for each phase shall be defined to meet, at a minimum, the following criterion:

The APE for any segment of the levees that are being improved as part of the phase of the Project shall include the levee segment and a corridor extending not less than 150 meters from the landside toe of the levee segment.

- B. The APE also shall include:

- (1) The extent of all Project construction and excavation activity required to construct flood control facilities and to modify irrigation and drainage infrastructure; and
- (2) The additional right-of-way/easements obtained by the Corps as part of the Project's features; and
- (3) All areas used for excavation of borrow material and habitat creation; and
- (4) All construction staging areas, access routes, spoil areas, and stockpiling areas.



- C. After the APE has been defined and consulted on in accordance with **Stipulation II (Area of Potential Effects)** above, construction or other Project activities may require revisions to the APE. If the APE is revised, the Corps shall consult on that revision in accordance with **Stipulation I (Timeframes and Review Procedures)**, and the Corps shall determine the potential for Project activities in a revised APE to affect potential Historic Properties, in accordance with **Stipulation IV (Identification and Evaluation)**.

### III. HISTORIC PROPERTIES MANAGEMENT PLAN

The Corps, in consultation with the Signatories, Concurring Parties, and Native American interested parties and Tribes, shall develop a Historic Property Management Plan (HPMP), which provides the framework by which remaining identification, evaluation of eligibility, findings of effect, and resolution of adverse effect efforts to Historic Properties will occur. The HPMP shall include consideration of property types, treatment of property types, expected methodology for identification and evaluation of potential historic properties, potential templates for work plans, provisions for avoidance or protection of historic properties, and consideration for identification and treatment of human remains. The HPMP shall be appended to this Agreement (**Attachment 3**) and will form the basis for any Historic Property Treatment Plans (HPTPs) that may be required for one or more phases of the Project. The HPMP shall be developed after execution of the Agreement, but before construction commences. For the overall Project and individual phases, the HPMP shall be the means for the Corps to comply with 36 C.F.R. § 800.6 and provide standardized methods for dealing with unanticipated discoveries in accordance with 36 C.F.R. § 800.13(a). The HPMP may be amended and appended to this Agreement without amending the Agreement.

- A. **Review:** The Corps shall submit the Draft HPMP to the SHPO, Concurring Parties, and Native American interested parties and Tribes for review and comment pursuant to **Stipulation I (Timeframes and Review Procedures)**.
- B. **Historic Property Treatment Plans:** The Corps shall consult the SHPO, pursuant to 36 C.F.R. § 800.5, when the Corps has determined that a Project activity will result in adverse effects to a Historic Property. An HPTP specific to the phase of the Project or the Historic Property will be drafted to describe how the Corps intends to resolve adverse effects and that HPTP may be appended to the HPMP. HPTPs shall be consistent with the HPMP and may incorporate by reference historic contexts, methods, procedures, and research designs, as appropriate. When incorporating portions of the HPMP by reference, the HPTP shall at a minimum include the date of the HPMP and where the HPMP is available to be viewed.

- (1) An HPTP may address individual or multiple Historic Properties or Historic Property types. An HPTP shall stipulate those actions the Corps shall take to resolve the adverse effects of the Project on Historic Properties within the project phase or specific action specified by the HPTP. For properties eligible under criteria specified in 36 C.F.R. § 60.4 (A) through (D), mitigation other than data recovery may be considered in the treatment plan (e.g., HABS/HAER, oral history, historic markers, exhibits, interpretive brochures or publications, or other means as deemed appropriate by the signatories). In addition to the SHPO, Concurring Parties, and Native American interested parties and Tribes the Corps may invite the interested public, in accordance with **Stipulation XIII (Public Consultation and Public Notice)**, to comment on the means of mitigation, as appropriate. HPTPs shall include specifications (including content and number of copies) for publication of brochures, pamphlets or synthesis reports for distribution to the general public. The Corps shall ensure that all provisions of an HPTP are carried out as stipulated in the HPTP.
- (2) **Historic Context, Recordation, and Treatment of Levees:** The Sacramento levees are a known potential Historic Property within the APE that may be affected by the Project. Sections of the levees have been recorded and evaluated for their individual eligibility for listing in the NRHP but no overall historic context or evaluation of the levee system has been developed. In order to document the levees for evaluation, the Corps will develop a historic context and HPTP for recordation of the Sacramento and American River levees as historic structures within the APE in order to evaluate the effects of the Project on the levees. If a historic context and/or HPTP for the levees within the APE has already been developed, the Corps may incorporate it as deemed appropriate by the Corps. The HPTP shall consider the levees in the context of the entire Sacramento and American River levee systems. Additionally, the HPTP shall require the development of clear and specific criteria for determining: (1) recordation guidelines for the levees within the APE, (2) contributing and non-contributing elements of the levee system, (3) thresholds of adverse effect, and (4) treatment of adverse effects. The HPTP shall be developed after execution of the Agreement and before construction commences. The Corps shall submit the HPTP for review, in accordance with **Stipulation I (Timeframes and Review Procedures)**.
- (3) HPTPs will be submitted and reviewed in accordance with **Stipulation I (Timeframes and Review Procedures)**, except for those HPTPs developed for Historic Properties discovered during construction activities, which shall follow

the review timeframes identified in **Stipulation IX (Discovery of Unknown Historic Properties)**. Circulation of an HPTP shall not include a recirculation of the HPMP.

**D. Reporting:** Reports and other data pertaining to the inventory of Historic Properties and the treatment of effects to Historic Properties will be distributed to Concurring Parties to this Agreement, Native American Tribes, and other members of the public, consistent with **Stipulation XIV (Confidentiality)** of this Agreement, unless parties have indicated through consultation that they do not want to receive a report or data.

**E. Amendments/Addendums/Revisions:** If an Historic Property type that is not covered by an existing HPTP is discovered within the APE subsequent to an initial inventory effort for a phase, or if there are previously unexpected effects to an Historic Property, and the Corps and SHPO agree that the Project may adversely affect the Historic Property, the Corps shall submit an addendum to the HPTP or a new HPTP to the SHPO and Concurring Parties for review and comment, and shall follow the provisions of **Stipulation IX (Discovery of Unknown Historic Properties)**. The HPTP may cover multiple discoveries for the same property type.

**F. Data Recovery:** If and when data recovery is proposed, the Corps, in consultation with the SHPO, shall ensure that HPTPs are developed consistent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* and the ACHP's "Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites" (ACHP, May 18, 1999).

**G. Final Phase Report Documenting Implementation of the Historic Properties Treatment Plan(s):** Within one year after the completion of all work for each phase of the Project, the Corps shall submit to the SHPO, Signatory Parties, Concurring Parties, and Native American interested parties and Tribes, a Final Phase Report documenting the results of all work prepared for that phase under the HPTPs, and the information learned from each of the Historic Properties. The submittal of the Final Phase Report shall be in accordance with **Stipulation I (Timeframes and Review Procedures)**.

#### **IV. PRE-HPMP APPROVAL IDENTIFICATION AND EVALUATION**

Should the HPMP not be finalized at the time that a phase of the Project may be proceeding to design and construction, the Corps shall consult with the Signatory Parties before issuing a notice to proceed on any phase of the Project. Should the

Signatory Parties agree that the work may proceed, the Corps shall comply with **Stipulation IV A., B., and C. (Identification and Evaluation)** and, as necessary, **Stipulation VI (Determination of Effects)**. The Corps shall complete any identification and evaluation, and as necessary, any assessment of effects to Historic Properties prior to proceeding with construction. If the Signatory Parties do not agree to proceed with the phase of the Project the Corps shall follow **Stipulation XV (Dispute Resolution)**.

**A. Identification of Potential Historic Properties:** An inventory of Historic Properties within the APE, consistent with the *Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716–44740) will be initiated for the Project, or for individual phases of the Project, as construction details become available.

Survey recordation shall include features, isolates, and re-recordation of previously recorded sites, as necessary. The survey shall ensure that potential Historic Properties such as historical structures and buildings, historical engineering features, landscapes, viewsheds, and traditional cultural properties (TCPs) with significance to Native American communities, are recorded in addition to archeological sites. Recordation of historic structures, buildings, objects, and sites shall be prepared using the California Department of Parks and Recreation (DPR) 523 Site Record forms.

**B. Property Types Exempt from Evaluation:** Attachment 4 to this Agreement lists the property types that the Signatories agree shall be exempt from evaluation as determined by the Corps in consultation with the SHPO. The Corps shall evaluate all other identified properties in accordance with **Stipulation IV.C (Evaluation of Potential Historic Properties)**.

**C. Evaluation of Potential Historic Properties:** After recordation on DPR 523 Site Record forms, potential Historic Properties shall be evaluated by a qualified professional, per Stipulation VII below, for their eligibility for listing in the NRHP consistent with the *Secretary of Interior's Standards for Evaluation*, 36 C.F.R. § 60.4. In accordance with **Stipulation I (Timeframes and Review Procedures)**, the Corps shall submit a completed inventory and evaluation for each phase of Project work.

## **V. GEOTECHNICAL INVESTIGATIONS**

For the purposes of gathering engineering data and for project planning, it may be necessary for the Corps to conduct limited geotechnical investigations at areas within the APE.

A. The Corps may conduct geotechnical investigations (e.g., borings, potholing, or trenches) for planning and exploratory efforts. The Corps shall follow Stipulation V.A(1) and (2), or may follow Stipulation V.A(3) if unable to follow Stipulation V.A(1) and (2):

(1) A records and literature search and consultation with Native Americans has been conducted and it has been determined there are no known existing potential Historic Properties located within 50 feet of the areas identified for geotechnical investigations, and an archeological field survey of the areas identified for geotechnical investigations has been conducted and it has been determined there are no known potential Historic Properties present;

(2) A potential Historic Property is identified during the records and literature search or field survey and consultation process as being within an area where geotechnical investigation will occur, and the geotechnical investigation is relocated at least 50 feet outside the site boundaries; or

(3) Provisions for an archeological monitor meeting the qualifications described in **Stipulation VII.C. (Archeological Monitor Standards)** are included in the contract specifications for the geotechnical investigations. As appropriate, or when geotechnical activities may occur in sensitive areas, an archeological monitor will be present for all ground disturbing activities.

B. If potential Historic Properties are discovered during geotechnical investigations, **Stipulation IX (Discovery of Unknown Historic Properties)** shall be followed;

C. A Memorandum for Record shall be written documenting the results of the records and literature search, the archeological field survey, any decisions to relocate geotechnical investigation areas, the determination for inclusion of an archeological monitor for ground disturbing activities, and a record of communication with Native American interested parties and Tribes, as appropriate.

## VI. ASSESSMENT OF EFFECTS

Avoidance of adverse effects to Historic Properties is the preferred treatment approach. The Corps will consider redesign of Project elements in order to avoid Historic Properties and Project effects that may be adverse. However, it may not be feasible to redesign the Project in order to avoid adverse effects to Historic Properties.

The Corps will apply the criteria of adverse effect, pursuant to 36 C.F.R. § 800.5(a)(1), to all Historic Properties within the APE that will be affected by the Project. The Corps shall submit findings of effects in accordance with **Stipulation I (Timeframes and Review Procedures)**.

If effects to Historic Properties are found to be adverse, **Stipulation III (Historic Properties Management Plan)**, above, will be followed.

## VII. QUALIFICATIONS

- A. Professional Qualifications:** All technical work required for historic preservation activities implemented pursuant to this Agreement shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the *Secretary of Interior's Professional Qualifications Standards* for archeology, architectural history, or history, as appropriate (48 FR 44739). "Technical work" here means all efforts to inventory, evaluate, and perform subsequent treatment such as data recovery excavation or recordation of potential Historic Properties that is required under this Agreement. This stipulation shall not be construed to limit peer review, guidance, or editing of documents by SHPO and associated Project consultants.
- B. Historic Preservation Standards:** Historic preservation activities carried out pursuant to this Agreement shall meet the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), as well as standards and guidelines for historic preservation activities established by the SHPO. The Corps shall ensure that all reports prepared pursuant to this Agreement will be provided to the Signatories, Concurring Parties, and Native American interested parties and Tribes and are distributed in accordance with **Stipulation XIV (Confidentiality)**, and meet published standards of the California Office of Historic Preservation, specifically, *Preservation Planning Bulletin* Number 4(a), "Archaeological Resources Management Reports (ARMR): Recommended Contents and Format" (December 1989).
- C. Archeological Monitor Standards:** Archeological monitoring activities required for exploratory, construction, or construction related ground disturbing activities implemented pursuant to this Agreement shall be carried out by a person meeting, at a minimum, the *Secretary of Interior's Professional Qualifications Standards* for prehistoric or historic archaeology, as appropriate (48 FR 44739). "Archeological monitoring" here includes monitoring ground disturbing activities that have been determined by the Corps to be occurring in areas potentially sensitive for Historic Properties or buried resources.

## VIII. NOTICES TO PROCEED WITH CONSTRUCTION

Notices to Proceed may be issued by the Corps for individual construction segments, defined by the Corps in its construction specifications, after a Historic Properties inventory has been completed [per **Stipulation III (Historic Properties Management Plan)** or **Stipulation IV (Identification and Evaluation)**], and prior to treatment of adverse effects on Historic Properties within the APE provided that:

- A. A plan to respond to inadvertent archeological discoveries is prepared by the Corps, and approved by SHPO, prior to the commencement of Project activities anywhere in the APE for that phase of the Project; and
- B. Project development activities do not encroach within 30 meters (100 feet) of the known boundaries of any Historic Property as determined from archeological site record forms, other documentation, or as otherwise defined in consultation with the SHPO and other parties, as appropriate; and
- C. An archeological monitor meeting the professional qualifications as described in **Stipulation VII (Qualifications)**, is present during any Project activities that are anticipated to extend either vertically or horizontally into any areas designated to be archeologically sensitive by the Corps, in consultation with SHPO, except in phases of construction for slurry walls where visual inspection of the construction area cannot be safely or feasibly accomplished.

## IX. DISCOVERY OF UNKNOWN HISTORIC PROPERTIES

The Corps is responsible for complying with 36 C.F.R. § 800.13(a) in the event of inadvertent discoveries of Historic Properties during implementation of the Project. The HPMP will provide procedures for complying with post review and inadvertent discoveries of Historic Properties. If the Corps authorizes work before the HPMP is finalized and there is a discovery of an unknown Historic Property, the Corps shall follow 36 C.F.R. § 800.13(b). Additionally, the following procedures shall be followed:

- A. **Workforce Training:** During implementation of Project activities, the Corps, or archeologists meeting the professional qualifications as described in **Stipulation VII (Qualifications)**, will provide training to all construction personnel, before they begin work, regarding proper procedures and conduct in the event that archeological materials are encountered during construction.

**B. Human Remains:** Treatment of human remains is governed by **Stipulation XII (Tribal Consultation and Treatment of Human Remains)**.

**X. CURATION**

To the extent that curation is determined to be appropriate mitigation to resolve adverse effects to Historic Properties, curation shall be conducted in accordance with 36 C.F.R. § 79, except those materials identified as Native American human remains and items associated with Native American burials. Archeological items and materials from State or privately owned lands shall be maintained in accordance with 36 C.F.R. § 79 until any specified analyses are complete. Although the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. § 3001 et seq.) does not apply to this Project, as there is no federally owned or administered property within the APE and the Corps will not be curating cultural materials subject to NAGPRA, this Agreement incorporates by reference the definitions for "human remains" and "funerary objects" set forth in 43 C.F.R § 10.2(d) and those definitions shall apply to actions under this Agreement. Further treatment of human remains is addressed in **Stipulation XII (Tribal Consultation and Treatment of Human Remains)**.

**XI. TRIBAL INVOLVEMENT**

- A.** In consultation with Native American interested parties and Tribes, the Corps will make a reasonable and good-faith effort to identify Historic Properties of traditional religious and cultural importance. The Corps shall ensure that consultation with Native American Tribes is initiated early with respect to the Project and continues throughout the Section 106 process.
- B.** In accordance with the guidance provided in National Register Bulletin 38 and Preservation Brief 36, the Corps will seek comments from all potentially interested Native American interested parties and Tribes in making determinations of NRHP eligibility for any Traditional Cultural Properties (TCPs) and Cultural Landscapes (as defined in Bulletin 38 and Preservation Brief 36). Review of documentation shall be consistent with **Stipulation I (Timeframes and Review Procedures)**.
- C.** Pursuant to 36 C.F.R. § 800.6(c)(2)-(3), the Corps shall consider requests by Native American Tribes to become Concurring Parties to this Agreement. In accordance with **Stipulation XIV (Confidentiality)**, Concurring Parties to this Agreement will receive documents produced under this Agreement, as appropriate.



D. Native American Tribes may choose not to sign this Agreement as a Concurring Party. Native American Tribes and individuals not acting as Concurring Parties to the Agreement will be contacted when the Corps identifies potential interest in a specific phase or action of the project or is contacted by a Native American individual or Native American Tribe expressing interest in the Project. The Corps will make a good faith effort to identify any Native American organizations and individuals with interest in the proposed treatment of Historic Properties. The identification effort may include contacting the Native American Heritage Commission (NAHC), using online databases, and using personal and professional knowledge. The Corps will then contact each identified organization and individual by mail, inviting them to consult about the specific treatment of Historic Properties. If interest from the contacted parties is received by the Corps, the Corps will proceed to consult in accordance with **Stipulation XI.A. (Tribal Involvement)**. Further consultation may also be carried out through either letters of notification, public meetings, site visits, and/or other method requested by a Native American interested party and Tribe. Where consultation is carried out outside of the normal Section 106 process, the Corps shall clearly state to the Tribes that the NEPA process includes compliance with Section 106. Failure of any contacted group to comment within thirty (30) calendar days shall not preclude the Corps from proceeding with the Project.

E. The Corps shall make a reasonable and good-faith effort to ensure that Native American Tribes, acting as either Concurring Parties or those expressing interest in the project, will be invited to participate in the development and implementation of the terms of this Agreement, including, but not limited to, the identification of the APE, identification of potential Historic Properties, determinations of eligibility, findings of effect, and the resolution of adverse effect for those Historic Properties. Review periods shall be consistent with **Stipulation I (Timeframes and Review Procedures)** except in situations involving unanticipated discoveries and treatment, which shall follow the review schedules of **Stipulation IX (Discovery of Unknown Historic Properties)**. The Corps shall ensure that all interested Native American reviewers shall receive copies of all final survey and evaluation reports.

## **XII. TRIBAL CONSULTATION AND TREATMENT OF HUMAN REMAINS**

There is no federally owned property within the designated APE, therefore NAGPRA would not apply. The CVFPB and landowner shall ensure that Native American human remains and grave goods encountered during the Undertaking that are located on state or private land are treated in accordance with the requirements in California State Health and Safety Code, Section 7050.5 and Public Resources Code 5097.98. If Native American human remains are encountered a clear means of identifying those remains

and grave goods will be described in the HPMP. Any procedures described in the HPTP regarding the handling or treatment of human remains will be coordinated with the landowner to ensure that they are consistent with Public Resources Code 5097.98. In the event that any Native American human remains or associated funerary items are identified, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission, shall be invited to advise the CVFPB and landowner in the treatment of any Native American human remains and items associated with Native American burials.

### **XIII. PUBLIC CONSULTATION AND PUBLIC NOTICE**

- A.** Pursuant to 36 C.F.R. § 800.6(c)(2)-(3), the Corps will consider requests by interested parties to become Concurring Parties to this Agreement. Within thirty (30) calendar days of the effective date of this Agreement, the Corps shall consult with the SHPO to compile a list of members of the interested public who shall be provided notice of this Agreement.
- B.** The interested public will be invited to provide input on the identification, evaluation, and proposed treatment of Historic Properties. This may be carried out through either letters of notification, public meetings, and/or site visits. Where consultation is carried out outside of the normal Section 106 process, the Corps shall clearly state to the public that the NEPA process includes compliance with Section 106. The Corps shall ensure that any comments received from members of the public are taken under consideration and incorporated where appropriate. Review periods shall be consistent with **Stipulation I (Timeframes and Review Procedures)**. In seeking input from the interested public, locations of Historic Properties will be handled in accordance with **Stipulation XIV (Confidentiality)**. In cases where the release of location information may cause harm to the Historic Property, this information will be withheld from the public in accordance with Section 304 of the NHPA (54 U.S.C. § 307103).

### **XIV. CONFIDENTIALITY**

Information regarding the nature and location of the archaeological sites and any other cultural resources discussed in this Agreement shall be kept confidential and limited to appropriate Corps personnel, Corps contractors, Native American tribes, the SHPO, and those parties involved in planning, reviewing and implementing this Agreement to the extent allowed by Section 304 of the NHPA (54 U.S.C. § 307103).

## **XV. DISPUTE RESOLUTION**

- A.** Should any Signatory Party to this Agreement object in writing to any action proposed or carried out pursuant to this Agreement, the Corps will immediately notify the SHPO and the Concurring Parties of the objection and proceed to consult with the objecting party for a period of time, not to exceed thirty (30) calendar days, to resolve the objection. If the objection is resolved through consultation, the Corps may authorize the disputed action to proceed in accordance with the terms of such resolution. If the Corps determines that the objection cannot be resolved, the Corps shall forward all documentation relevant to the dispute to the ACHP. Within forty-five (45) calendar days after receipt of all pertinent documentation, the ACHP shall either:
- a. Advise the Corps that the ACHP concurs in the Corps' proposed response to the objection, whereupon the Corps will respond to the objection accordingly; or
  - b. Provide the Corps with recommendations, which the Corps shall consider in reaching a final decision regarding the objection; or
  - c. Notify the Corps that the ACHP will comment in accordance with the requirements of Section 106 of the NHPA, and proceed to comment. Any ACHP comment provided in response shall be considered by the Corps, pursuant to the requirements of Section 106 of the NHPA.
- B.** Should the ACHP not exercise one of the options under **Stipulation XV.A. (Dispute Resolution)** within forty-five (45) calendar days after receipt of all submitted pertinent documentation, the Corps' responsibilities under Section 106 of the NHPA are fulfilled upon implementation of the proposed response to the objection.
- C.** The Corps shall consider any ACHP recommendation or comment and any comments from the SHPO to this Agreement provided in accordance with this stipulation with reference only to the subject of the objection; the Corps' responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.
- D.** The Corps shall provide the SHPO with a written copy of its final decision regarding any objection addressed pursuant to **Stipulation XV.A. (Dispute Resolution)**.
- E.** At any time during implementation of the measures stipulated in this Agreement should an objection pertaining to the Agreement be raised by a Concurring Party,

Native American Tribe, or a member of the public, the Corps shall notify the Signatory and Concurring Parties and take the objection under consideration, consulting with the objecting party and, should the objecting party request, any of the Signatory and Concurring Parties to this Agreement, for no longer than fifteen (15) calendar days. The Corps shall consider the objection, and in reaching its decision, will consider all comments provided by the other parties. Within fifteen (15) calendar days following closure of the comment period, the Corps will render a decision regarding the objection and respond to the objecting party. The Corps will promptly notify the other parties of its decision in writing, including a copy of the response to the objecting party. The Corps' decision regarding resolution of the objection will be final. Following issuance of its final decision, the Corps may authorize the action that was the subject of the dispute to proceed in accordance with the terms of that decision. The Corps' responsibility to carry out all other actions under this Agreement shall remain unchanged.

## **XVI. NOTICES**

- A.** All notices, demands, requests, consents, approvals or communications from all parties to this Agreement to other parties to this Agreement shall be personally delivered, sent by United States Mail, or emailed. For communications sent by United States Mail, all parties shall be considered in receipt of the materials five (5) calendar days after deposit in the United States mail, certified and postage prepaid, return receipt requested.
- B.** Signatory and Concurring Parties agree to accept facsimiles or copies of signed documents and agree to rely upon such facsimiles or copies as if they bore original signatures.

## **XVII. AMENDMENTS, NONCOMPLIANCE, AND TERMINATION**

- A. Amendment:** Any Signatory Party to this Agreement may propose that the Agreement be amended, whereupon the Signatories shall consult for 30 days to consider such amendment. The Agreement may be amended only upon written concurrence of all Signatories.

All attachments to this Agreement, and other instruments prepared pursuant to this agreement including, but not limited to, the Project's description, initial cultural resource inventory report and maps of the APE, the HPMP, HPTPs, and monitoring and discovery plans, may be individually revised or updated through consultation consistent with **Stipulation I (Timeframes and Review Procedures)** and

agreement in writing of the Signatories without requiring amendment of this Agreement, unless the Signatories through such consultation decide otherwise. In accordance with **Stipulation XI (Tribal Involvement)** and **Stipulation XIII (Public Consultation and Public Notice)**, the Concurring Parties, interested Native American Tribes, and interested members of the public, will receive amendments to the Project's description, initial cultural resource inventory report and maps of the APE, the HPMP, HPTPs, and monitoring and discovery plans, as appropriate, and copies of any amendment(s) to the Agreement.

- B. Termination:** Only the Signatories may terminate this Agreement. If this Agreement is not amended as provided for in **Stipulation XVII.A. (Amendment)**, or if any Signatory proposes termination of this Agreement for other reasons, the Signatory proposing termination shall notify the other Signatory in writing, explain the reasons for proposing termination, and consult with the other Signatory to seek alternatives to termination, within thirty (30) calendar days of the notification.

Should such consultation result in an agreement on an alternative to termination, the Signatories shall proceed in accordance with that agreement.

Should such consultation fail, the Signatory proposing termination may terminate this Agreement by promptly notifying the other Signatory and Concurring Parties in writing.

Beginning with the date of termination, the Corps shall ensure that until and unless a new agreement is executed for the actions covered by this Agreement, such undertakings shall be reviewed individually in accordance with 36 C.F.R. § 800.4-800.6.

- C. Duration:** This Agreement shall remain in effect for a period of ten (10) years after the date it takes effect and shall automatically expire and have no further force or effect at the end of this ten-year period unless it is terminated prior to that time. No later than ninety (90) calendar days prior to the expiration date of the Agreement, the Corps shall initiate consultation to determine if the Agreement should be allowed to expire automatically or whether it should be extended, with or without amendments, as the Signatories may determine. Unless the Signatories unanimously agree through such consultation on an alternative to automatic expiration of this Agreement, this Agreement shall automatically expire and have no further force or effect in accordance with the timetable stipulated herein.

## **XVIII. ANNUAL REPORTING**

At the end of every calendar year following the execution of this Agreement, the Corps shall provide all parties to this Agreement a summary report detailing work carried out pursuant to its terms, if any. Such report shall describe progress made implementing the terms of the Agreement as well as include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the Corps' efforts to carry out the terms of this Agreement. The Corps shall arrange a meeting with the Signatories within 30 days after the submission of the annual summary report to discuss the on-going implementation of the PA


### **XIX. EFFECTIVE DATE**

This Agreement shall take effect on the date that it has been fully executed by the Corps and the SHPO.

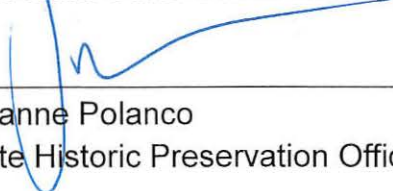
**EXECUTION** of this Agreement by the Corps and the SHPO, its transmittal to the ACHP, and subsequent implementation of its terms evidence that the Corps has afforded the ACHP an opportunity to comment on the undertaking and its effects on Historic Properties, that the Corps has taken into account the effects of the undertaking on Historic Properties, and that the Corps has satisfied its responsibilities under Section 106 of the NHPA and applicable implementing regulations for all aspects of the undertaking.

### **SIGNATORY PARTIES:**

#### **U.S. Army Corps of Engineers**

By  Date 28 SEP 2015  
Michael J. Farrell  
Colonel, U.S. Army  
District Commander

#### **California State Office of Historic Preservation**

By  Date 1 Oct 2015  
Julianne Polanco  
State Historic Preservation Officer

PROGRAMMATIC AGREEMENT  
AMONG THE  
U.S. ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE  
WEST SACRAMENTO GENERAL REEVALUATION REPORT,  
YOLO COUNTY and SOLANO COUNTIES, CALIFORNIA

**CONCURRING PARTY**

**West Sacramento Flood Control Agency**

By \_\_\_\_\_ Date \_\_\_\_\_

PROGRAMMATIC AGREEMENT  
AMONG THE  
U.S. ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE  
WEST SACRAMENTO GENERAL REEVALUATION REPORT,  
YOLO COUNTY and SOLANO COUNTIES, CALIFORNIA

**CONCURRING PARTY:**

**Central Valley Flood Protection Board**

By \_\_\_\_\_ Date \_\_\_\_\_



PROGRAMMATIC AGREEMENT  
AMONG THE  
U.S. ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE  
WEST SACRAMENTO GENERAL REEVALUATION REPORT,  
YOLO COUNTY and SOLANO COUNTIES, CALIFORNIA

**CONCURRING PARTY:**

**Yocha Dehe Wintun Nation**

By \_\_\_\_\_ Date \_\_\_\_\_  
Marshall McKay

Chairman

PROGRAMMATIC AGREEMENT  
AMONG THE  
U.S. ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE  
WEST SACRAMENTO GENERAL REEVALUATION REPORT,  
YOLO COUNTY and SOLANO COUNTIES, CALIFORNIA

**CONCURRING PARTY:**

**United Auburn Indian Community**

By \_\_\_\_\_ Date \_\_\_\_\_  
(Name)  
Chairman

## **Attachment 1**

### **Project Description**

## **Attachment 1**

### **West Sacramento General Reevaluation Report – Project Description**

#### **1.0 INTRODUCTION**

The primary objective of the West Sacramento Project General Reevaluation Report (GRR) is to determine the extent of Federal interest in reducing the flood risk within the study area. The purpose of the GRR is to bring the 50 miles of perimeter levees surrounding West Sacramento into compliance with applicable Federal and State standards for levees protecting urban areas. Proposed levee improvements would address adequate levee height, levee seepage, erosion, and stability conditions along the West Sacramento levee system.

#### **1.1 Scope of Environmental Analysis**

The West Sacramento Project GRR was by the United States Army Corps of Engineers (Corps) and includes the evaluation of the Federal interest in addressing seepage, slope stability, erosion, and height problems on the levees surrounding West Sacramento.

#### **1.2 Project Location and Study Area**

The West Sacramento Project GRR study area refers to the area that would be protected by the proposed levee improvements, including the city of West Sacramento itself, and the lands within WSAFCA's boundaries, which encompass portions of the Sacramento River, the Yolo Bypass, the Sacramento Bypass, and the Sacramento Deep Water Ship Channel (DWSC). The flood protection system associated with these waterways consists of over 50 miles of levees in Reclamation District (RD) 900, RD 537, DWR's Maintenance Area 4, and the DWSC, that completely surround the city. The city of West Sacramento is located in eastern Yolo County at the confluence of the American and Sacramento Rivers. The city lies within the natural floodplain of the Sacramento River, which bounds the city along the north and east. It is made up of a small amount of high ground north of Highway 50 along the Sacramento River, and reclaimed land protected from floods by levees and the Yolo and Sacramento Bypass systems. These bypasses divert floodflows around the city to the west. In addition to the area within the city limits (in Yolo County), the study area partially extends into Solano County on the extreme southwestern edge along the DWSC.

The DWSC provides a navigable passageway for commercial shipping to reach the Port of West Sacramento (formerly Port of Sacramento) from the Pacific Ocean via the San Francisco Bay, Delta, and connecting waterways. The DWSC water surface elevation is directly influenced by changes in water levels in the Delta at the south end of the Yolo Bypass, and is relatively insensitive to stage in the Sacramento River.

The DWSC and barge canal bisect the city into two subbasins, separating the developing Southport area from the more established neighborhoods of Broderick and Bryte to the north (City of West Sacramento 2000). The two subbasins are broken up into nine levee reaches based on location and fixes. The North Basin, which encompasses 6,100 acres, contains:

- Sacramento River north levee – 5.5 miles from the Sacramento Bypass south to the Stone Locks on the barge canal.
- Port north levee – 4.9 miles from the Stone Locks west to the Yolo Bypass levee.
- Yolo Bypass levee – 3.7 miles from the Port north levee north to the Sacramento Bypass.
- Sacramento Bypass levee – 1.1 miles from the Yolo Bypass levee to the Sacramento River.
- Sacramento Bypass training levee – 0.5 miles west into the Yolo Bypass from the Sacramento Bypass levee.

The South Basin, which encompasses 6,900 acres, contains:

## 1.6 Levee Overtopping

It is possible that a large enough flood event could occur that would overtop the levees. In past flooding, levees upstream have failed, relieving some of the pressure on the West Sacramento area. But as repairs to these levees are made, it increases the flood risk to West Sacramento as project levees could face the full brunt of the flood event. Because these levees were not built to modern engineering standards and levee failures upstream are assumed not to occur, levee overtopping would potentially lead to failure of the levee and cause devastating flooding.

## 2.0 The Proposed Project

### 2.1 Improve Levees with Setback Levee along Sacramento River South

Levee repairs would include the construction of new setback levees. The setback levees would be constructed roughly 500 feet west of the existing levee as shown on Plate 2-7. The existing levee may be degraded and breached in several places and/or the bank would need to be maintained in the current manner or could require erosion protection. The levee remediation measures proposed is summarized in Table 3-1 below.

**Table 2-1. Proposed Remediation Measures by Levee Reach.**

| Levee Reach                      | Seepage Measures                          | Stability Measures                       | Overtopping Measures | Erosion Protection Measures    |
|----------------------------------|---|--|----------------------|--------------------------------|
| <b>North Basin</b>               |   |  |                      |                                |
| Sacramento River North           | Cutoff Wall                               | Cutoff Wall                              | Levee raise          | Bank Protection                |
| Port North                       | ---                                       | ---                                      | Floodwall            | ---                            |
| Yolo Bypass *                    | Cutoff Wall                               | Cutoff Wall                              | ---                  | ---                            |
| Sacramento Bypass Training Levee | ---                                       | ---                                      | ---                  | Bank Protection                |
| <b>South Basin</b>               |   |  |                      |                                |
| Sacramento River South           | Setback Levee, Cutoff Wall, Seepage Berm, | Setback Levee, Cutoff Wall, Seepage Berm | ---                  | Setback Levee, Bank Protection |
| South Cross                      | Stability Berm, Relief Wells              | ---                                      | Levee Raise          | ---                            |
| Deep Water Ship Channel East *   | Cutoff Wall                               | Cutoff Wall                              | Levee Raise          | Bank Protection                |
| Deep Water Ship Channel West*    | Cutoff Wall                               | Cutoff Wall                              | Levee Raise          | ---                            |
| Port South*                      | Cutoff Wall                               | Cutoff Wall                              | Levee Raise          | ---                            |

\* The entire levee reach does not need remediation, only specific sections.

It is estimated that 9 million cy of borrow material would be needed to construct the project. Construction of the proposed project is to take approximately 19 years if each reach is constructed sequentially. The tentative schedule of construction is shown in Table 2-2 . The durations are for construction activities only, and do not include the time needed for design, right-of-way, utility relocation, etc.

|  |  |         |                    |                          |
|--|--|---------|--------------------|--------------------------|
|  |  | 9,000   | Height/Seepage     | 75 Foot Deep Slurry Wall |
|  |  | 75,300  | Height             | Embankment Fill          |
|  |  | 100,000 | Erosion Protection | Bank Protection          |

### 3.0 Description of Measures Proposed

Levees in the project area require improvements to address seepage, slope stability, overtopping, and erosion concerns. The measures proposed to improve the levees are described below and consist of: (1) seepage cutoff walls, (2) seepage berms, (3) stability berms, (4) levee raises, (5) flood walls, (6) relief wells, (7) sheet pile walls, (8) jet grouting, and (9) bank protection. The above measures would be implemented by fixing levees in place, constructing adjacent levees, or constructing a setback levee. It is possible that sheet pile walls, jet grouting, and relief wells would be used at various locations so they are also described below. Once a levee is modified, regardless of the measure implemented for the project, the levee would be brought into compliance with Corps levee design criteria. This would include slope flattening and/or crown widening, where required. The levee crown would be widened to 20 feet, and 3:1 landside and waterside slopes would be established where possible. If necessary, the existing levee centerline would be shifted landward, where necessary, in order to meet the Corps' standard levee footprint requirements.

#### Seepage and Slope Stability Measures

##### **Cutoff Walls**

To address seepage concerns, a cutoff wall would be constructed through the levee crown. The cutoff wall would be installed by one of two methods: (1) conventional open trench cutoff walls, or (2) deep soil mixing (DSM) cutoff walls. The method of cutoff wall selected for each reach would depend on the depth of the cutoff wall needed to address the seepage. The open trench method can be used to install a cutoff wall to a depth of approximately 85 feet. For cutoff walls of greater depth, the DSM method would be utilized.

Prior to construction of either method of cutoff wall, the construction site and any staging areas would be cleared, grubbed, and stripped. The levee crown would be degraded to approximately half the levee height to create a large enough working platform (approximately 30 feet) and to reduce the risk of hydraulically fracturing the levee embankment from the insertion of slurry fluids (Figure 3-1). Excavated and borrow material (from nearby borrow sites) would be stockpiled at staging areas. Once the cutoff wall is complete, haul trucks, front end loaders, and scrapers would bring borrow materials to the site, which would then be spread evenly and compacted according to levee design plans. The levee would be hydroseeded once construction was completed.

##### Conventional Open Trench Cutoff Wall

A trench approximately 3 feet wide would be excavated at the top of levee centerline and into the subsurface materials up to 85 feet deep with a long boom excavator. As the trench is excavated, it would be filled with low density temporary bentonite water slurry to prevent cave in. The soil from the excavated trench would be mixed nearby with hydrated bentonite, and in some applications cement. The soil bentonite mixture would be backfilled into the trench, displacing the temporary slurry. Once the slurry has hardened, it would be capped and the levee embankment would be reconstructed with impervious or semi-impervious soil.

##### Deep Soil Mixing Cutoff Wall

The DSM method would require large quantities of cement bentonite grout. This would necessitate the use of a contractor-provided, on-site batch plant and deliveries of concrete aggregate, concrete sand, bentonite, and cement. The batch plant would be powered by generators or electricity from overhead power lines and would be located within the project area or in an adjacent staging area.



Seepage berms may have an optional feature of a drainage relief trench under the toe of the berm. Drained seepage berms would include the installation of a drainage layer (gravel or clean sand) beneath the seepage berm backfill and above the native material at the levee landside toe. A drained seepage berm would likely decrease the overall footprint of the berm.

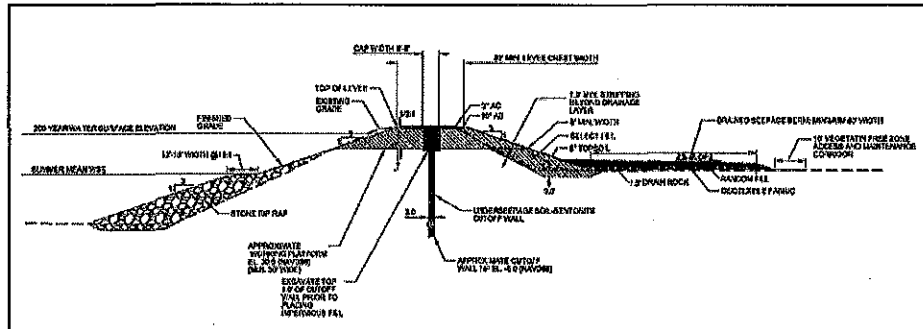


Figure 3-2. Fix in Place Levee Improvement with Seepage Berm.

### Stability Berm

A stability berm would be constructed against the landside slope of the existing levee with the purpose of supplying support as a buttress. A stability berm is proposed along the South Cross levee as shown in Figure 2-3. The height of the stability berm would generally be  $\frac{2}{3}$  of the levee height, and would extend for a distance determined by the structural needs of the levee along that reach. Embankment fill material necessary to construct the berm is excavated by a bulldozer from a nearby borrow site. Front-end loaders would load haul trucks with the borrow material and the haul trucks would transport the material to the stability berm site. Motor graders would spread the material evenly according to design specifications, and a sheep's foot roller would compact the material. Water trucks would distribute water over the material to ensure proper moisture for compaction. The new seepage berm would be hydroseeded after construction.

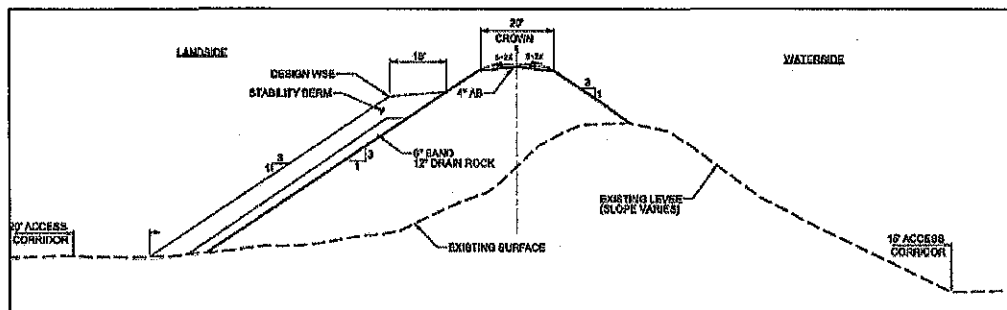


Figure 3-3. Levee Improvement with Stability Berm.

### Adjacent Levee

Constructing an adjacent levee is one of the ways to improve levees and is proposed along some sections of the Sacramento River south levee. The adjacent levee essentially adds material to increase the cross section of the levee, thereby allowing the prescribed 3:1 landside slopes and 20-foot-wide crown to be established (Figure 3-4). The adjacent levee would be constructed on the landward side of the levee and would make it possible to leave all waterside vegetation in place.

The first construction phase would include clearing, grubbing, and stripping the work site and any construction staging areas, if necessary. A trapezoidal trench would be cut at the toe of the slope and the levee embankment may be cut in a stair-step fashion to allow the new material to key into the existing material. Bulldozers would then excavate and stockpile borrow material from a nearby borrow site. Front-end loaders would load haul trucks with the borrow material, and the haul trucks would

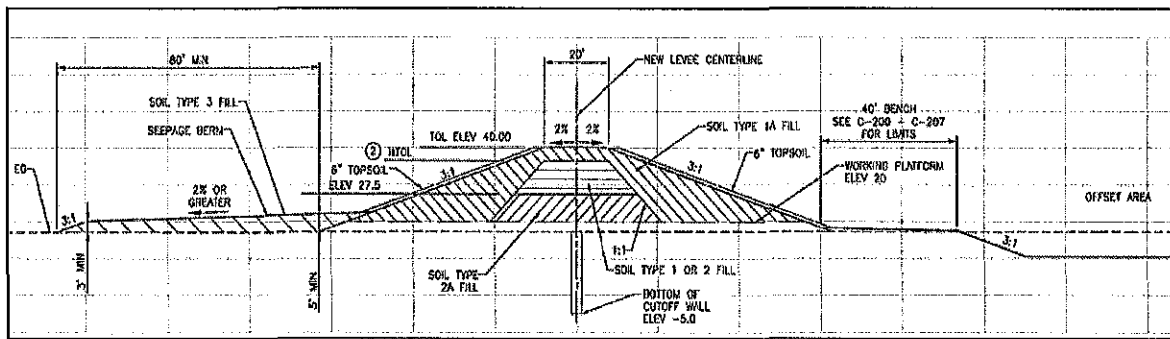


Figure 3-5. Setback Levee Improvement.

### Sheet Pile Wall

A sheet pile wall is proposed at the Stone Locks to tie together the levees on either side of the Barge Canal (Figure 3-6). A trench would be excavated along the sheet pile alignment to allow the pile to be driven to the proposed depth (below the existing levee grade). A driving template fabricated from structural steel would be placed to control the alignment as the sheet pile is installed. A hydraulic or pneumatically operated pile driving head attached to a crane would drive the sheet pile into the levee crown to the desired depth (up to 135 feet). An additional crane or excavator would be used to facilitate staging of the materials. The conditions of the site, driving pressure, hydrostatic loads, and corrosion considerations would determine the thickness and configuration of the sheet piles. If conditions indicate that corrosion is an issue, the sheet piles could be coated, oversized to provide additional thickness as a corrosion allowance, and/or provided with a cathodic protection system.

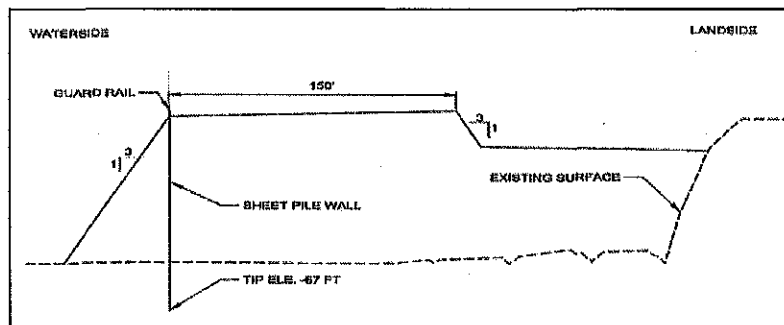


Figure 3-6. Sheet Pile Wall with Embankment Fill.

### Jet Grouting

Jet grouting typically is used in constructing a slurry cutoff wall to access areas other methods cannot. In this regard, it is typically a spot application rather than a treatment to be applied on a large scale. Jet grouting would be used around existing utilities not proposed for removal, and at bridges along the West Sacramento levees. It involves injecting fluids or binders into the soil at very high pressure. The injected fluid can be grout; grout and air; or grout, air, and water. Jet grouting breaks up soil and, with the aid of a binder, forms a homogenous mass that solidifies over time to create a mass of low permeability.

Equipment required for jet grouting consists of a drill rig fitted with a special drill string; a high pressure, high flow pump; and an efficient batch plant with sufficient capacity for the required amount of grout and water, supporting generators and air compressors, holding tanks, and water tanks, with bulk silos of grout typically used to feed large mixers. The high-pressure pump conveys the grout, air, and/or water through pipelines that run the length of the site through the drill string to a set of nozzles located just above the drill bit. Smaller equipment can be used in combination with the single phase-fluid system and can be permanently trailer-mounted to permit efficient mobilization and easy movement at the job site. Jet-grouted columns range from 1 to 16 feet in diameter and typically are interconnected to form



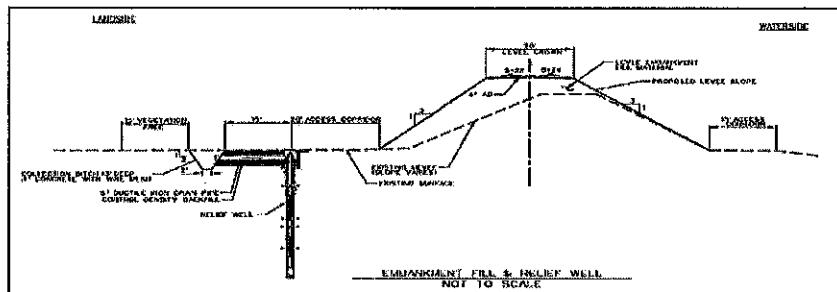


Figure 3-7. Fix in Place Levee Improvement with Relief Well.

## Overtopping Measures

### Levee Height Raise

To address identified height concerns, additional borrow material would be added after cutoff walls and levee reshaping improvements are completed (Figure 3-8). The additional material would be brought from nearby borrow sites, stockpiled in staging areas then hauled to the site with trucks and front end loaders. Material would be spread evenly and compacted according to levee design plans. The levee would be hydroseeded once construction was completed.

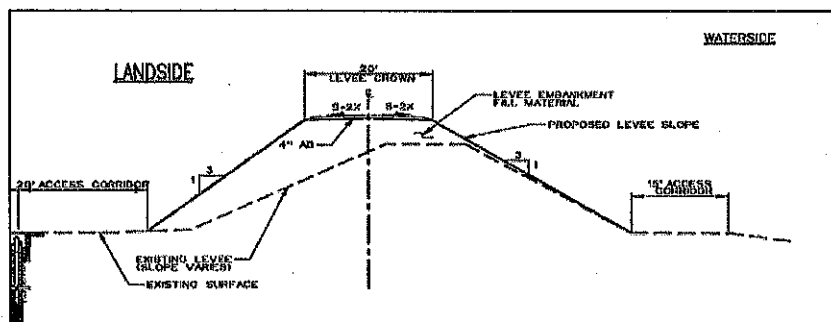


Figure 3-8. Levee Height Raise.

### Floodwalls

Floodwalls are proposed along the waterside hinge point of the Port north levee and along the selected levee alignment around the Port of West Sacramento. Floodwalls are an efficient, space-conserving method for containing unusually high water surface elevations. They are often used in highly developed areas, where space is limited. To begin the floodwall construction, the area would be cleared, grubbed, stripped, and excavation would occur to provide space to construct the footing for the floodwall. The floodwall would primarily be constructed from pre-fabricated materials, although it may be cast or constructed in place, and would be constructed almost completely upright. Floodwalls mostly consist of relatively short elements, making their connections very important to their stability. The floodwalls would be designed to disturb a minimal amount of waterside slope and levee crown for construction (Figure 3-9). The height of the floodwalls varies from 1 to 4 feet, as required by water surface elevations. The waterside slope would be re-established to its existing slope and the levee crown would grade away from the wall and be surfaced with aggregate base.

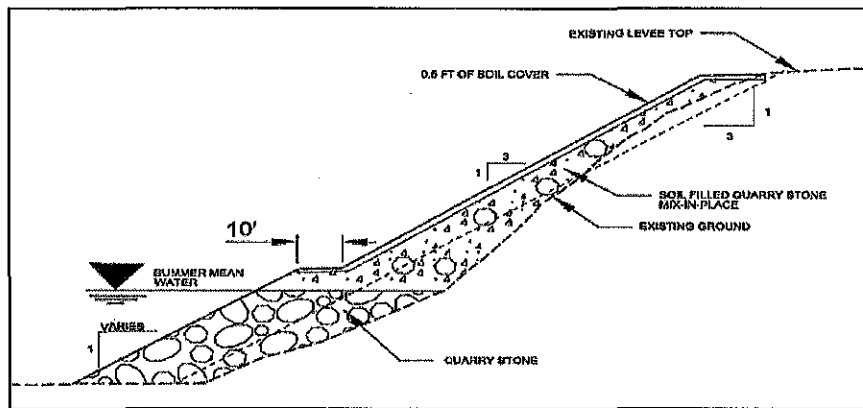


Figure 3-10. Bank Protection Typical Design.

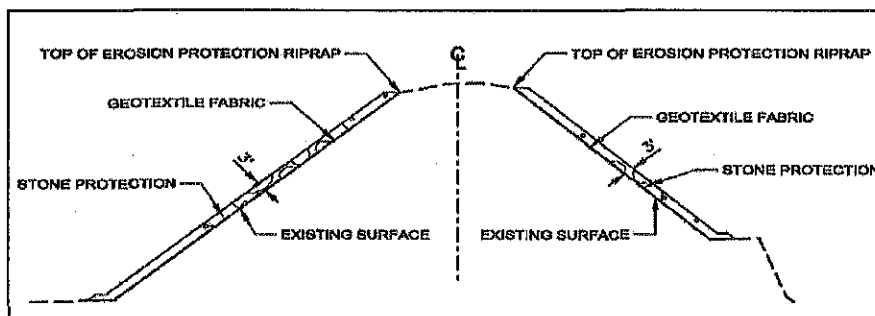


Figure 3-11. Bank Protection along Sacramento Bypass Training Levee.

#### Levee Biotechnical Measures

In addition to the bank protection measure, biotechnical measures have been proposed for several reaches. This measure is being considered for lower velocity reaches to preserve existing vegetation. Under this measure, the Corps would use plant material and minimal amounts of rock to stabilize the eroded slope and prevent further loss of material.

#### Additional Construction Measures

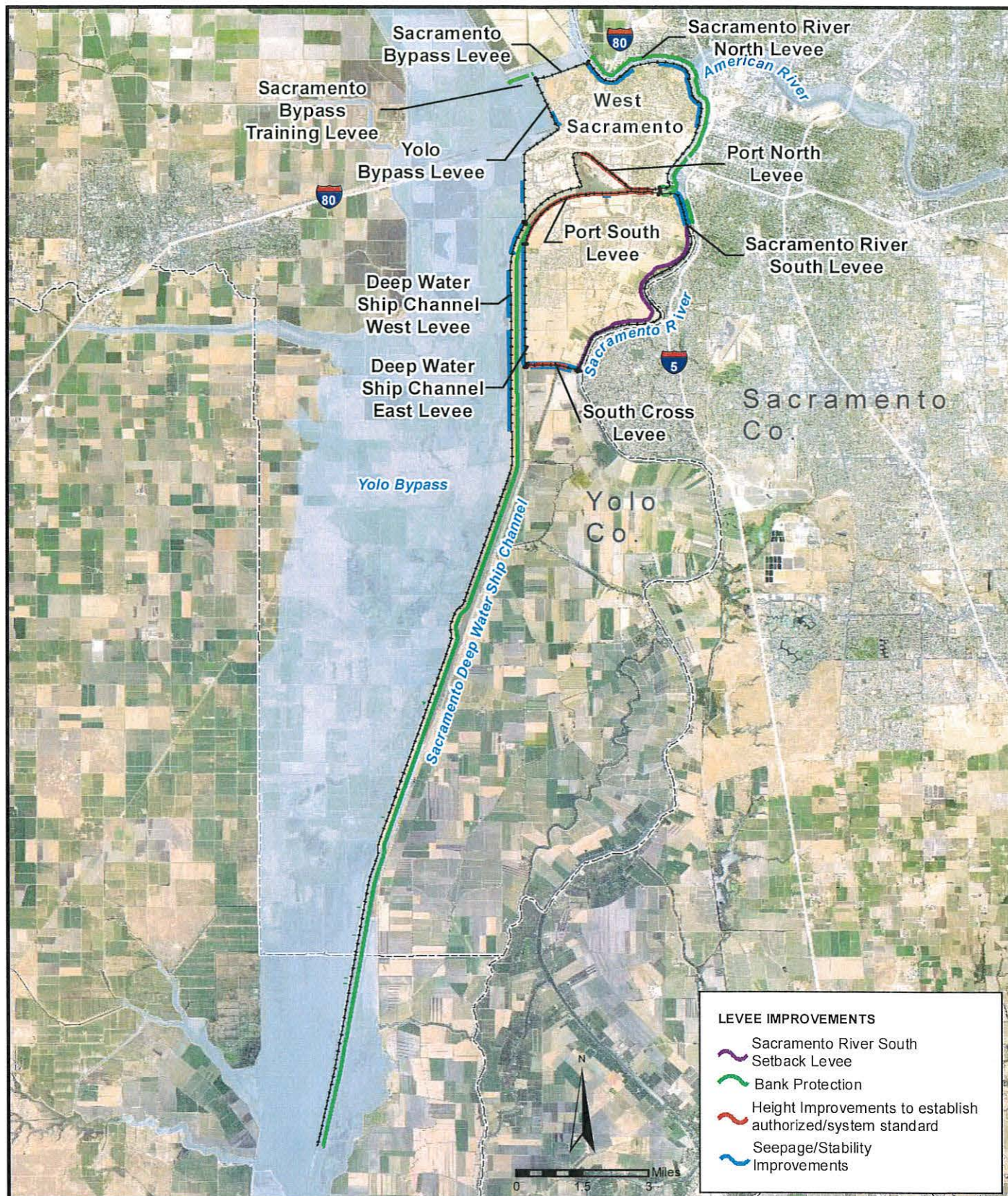
In addition to the proposed levee improvements measures described above, the following measures and policies would be addressed during construction:

- The Corps' standard levee footprint would be established during construction of structural improvements on all levees that are out of compliance. The standard levee footprint consists of a 20 foot crown width and 3:1 waterside and landside slopes. If the 3:1 landside slope is not possible based on site specific conditions then a minimum 2:1 landside slope would be established with supporting engineering analysis.
- A 20 foot landside and waterside maintenance access would be established. In areas where 20 feet cannot be obtained, 10 feet is allowable.
- Utility encroachments such as structures, certain vegetation, power poles, pump stations, and levee penetrations (e.g., pipes, conduits, cables) would be brought into compliance with applicable Corps policy or removed depending on type and location. This measure would include the demolition of such features and relocation or reconstruction as appropriate on a case-by-case basis (or retrofit to comply with standards). Utilities replacements would occur via one of two methods: (1) a surface line over the levee prism or (2) a through-levee line equipped with positive closure devices.

## **Attachment 2**

### **Area of Potential Effect Overview and Detail**





### Legend

- Levee Centerline
- Floodways
- West Sacramento Project Area
- County Lines

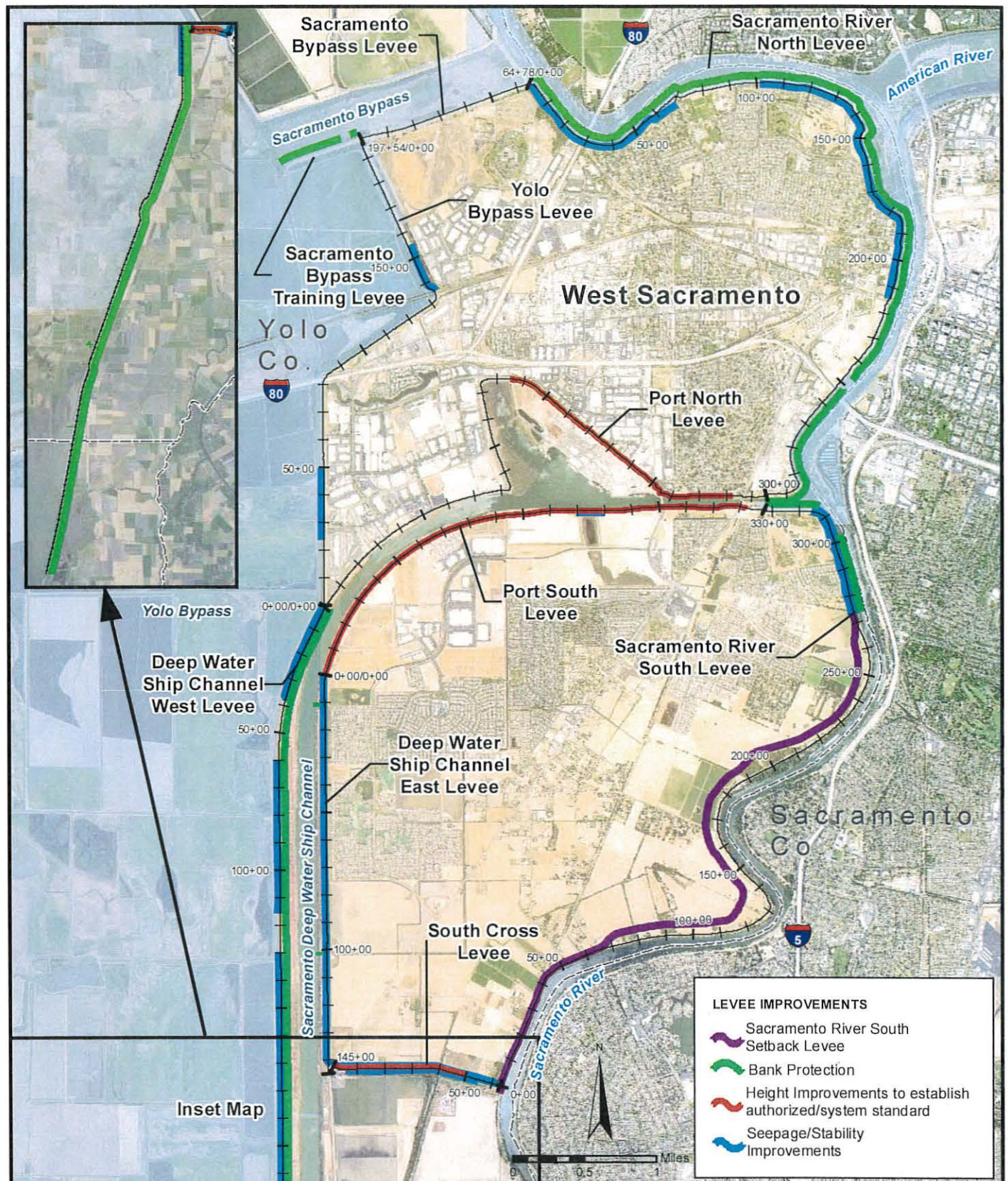


WEST SACRAMENTO GRR  
WEST SACRAMENTO, CALIFORNIA

## AREA OF POTENTIAL EFFECTS

U.S. ARMY CORPS OF ENGINEERS  
SACRAMENTO DISTRICT





### Legend

- Levee Centerline
- Floodways
- West Sacramento Project Area
- County Lines



WEST SACRAMENTO GRR  
WEST SACRAMENTO, CALIFORNIA

## AREA OF POTENTIAL EFFECTS

U.S. ARMY CORPS OF ENGINEERS  
SACRAMENTO DISTRICT



### **Attachment 3**

Historic Properties Management Plan  
(To be appended)

## **Attachment 4**

### **Property Types Exempt from Evaluation**

This attachment defines categories of properties that do not warrant evaluation pursuant to Stipulation IV.B of this Agreement. Only individuals meeting the Secretary of the Interior's Professional Qualification Standards pursuant to Stipulation VII.A of this agreement are authorized to determine whether properties meet the requirements of this attachment and are therefore exempt from evaluation and consultation with SHPO. Exempted properties may be documented, if documentation is warranted, at a level commensurate with the nature of the property (e.g., DPR 523 Primary Form, Location Map, memo). The Corps Cultural Resources staff shall make any final determinations on level of documentation required under this agreement.

### **Exempt Property Type 1: Archaeological Property Types and Features**

1. Isolated prehistoric finds consisting of fewer than three items per 100 m<sup>2</sup>
2. Isolated historic finds consisting of fewer than three artifacts per 100 m<sup>2</sup> (several fragments from a single glass bottle, and similar vessels are to be counted as one artifact)
3. Refuse scatters less than 50 years old (scatters containing no material that can be dated with certainty as older than 50 years old)
4. Features less than 50 years old (those known to be less than 50 years old through map research, inscribed dates, etc.)
5. Isolated refuse dumps and scatters over 50 years old that lack specific associations
6. Isolated mining prospect pits
7. Placer mining features with no associated structural remains or archaeological deposits
8. Foundations and mapped locations of buildings or structures more than 50 years old with few or no associated artifacts or ecofacts, and with no potential for subsurface archaeological deposits

### **Exempt Property Type 2: Minor, Ubiquitous, or Fragmentary Infrastructure Elements**

The following list does not apply to properties 50 years old or older that could be potentially important, nor does it apply to properties that may contribute to the significance of larger historic properties such as districts or cultural landscapes.

### **Water Conveyance and Control Features**

- Natural bodies of water providing a water source, conveyance, or drainage
- Modified natural waterways



- Concrete-lined canals less than 50 years old and fragments of abandoned canals
- Roadside drainage ditches and secondary agricultural ditches
- Small drainage tunnels
- Flood storage basins
- Reservoirs and artificial ponds
- Levees and weirs
- Gates, valves, pumps, and other flow control devices
- Pipelines and associated control devices
- Water supply and waste disposal systems
- Rip-rap

#### **Recent Transportation or Pedestrian Facilities**

- Railroad grades converted to other uses, such as roads, levees, or bike paths
- Bus shelters and benches
- Vista points and rest stops
- Bike paths, off-road vehicle trails, equestrian trails, and hiking trails
- Parking lots and driveways

#### **Highway and Roadside Features**

- Isolated segments of bypassed or abandoned roads
- Retaining walls
- Highway fencing, soundwalls, guard rails, and barriers
- Drains and culverts, excluding culverts assigned a Caltrans bridge number
- Cattle crossing guards
- Roadside landscaping and associated irrigation systems
- Signs and reflectors
- Telecommunications services, including towers, poles, dishes, antennas, boxes, lines, cables, transformers, and transmission facilities
- Utility services, including towers, poles, boxes, pipes, lines, cables, and transformers
- Oil and gas pipelines and associated control devices

#### **Adjacent Features**

- Fences, walls, gates, and gateposts

- Isolated rock walls and stone fences
- Telephone booths, call boxes, mailboxes, and newspaper receptacles
- Fire hydrants and alarms
- Markers, monuments, signs, and billboards
- Fragments of bypassed or demolished bridges
- Temporary roadside structures, such as seasonal vendors' stands
- Pastures, fields, crops, and orchards
- Corrals, animal pens, and dog runs
- Open space, including parks and recreational facilities
- Building and structure ruins and foundations less than 50 years old

#### **Movable or Minor Objects**

- Movable vehicles
- Stationary vehicles less than 50 years old or moved within the last 50 years
- Agricultural, industrial and commercial equipment and machinery
- Sculpture, statuary, and decorative elements less than 50 years old or moved within the last 50 years

**West Sacramento GRR**  
**EIS Cultural Resources Appendix**  
**Enclosure 2**  
Section 106 Consultation Record

**West Sacramento GRR and Southport Early Implementation Project**

**Record of Cultural Resources 106 Consultation**

The West Sacramento General Reevaluation Report ( West Sac GRR) project and the Southport Early Implentation Project (EIP) 408 were consulted on within a concurrent time frame. For the West Sacramento GRR project, a list of Tribes and individuals with interest in the area was obtained by the Corps through the Native American Heritage Commission. On this list, two Tribes and one individual were listed as possibly having interest in projects located in Yolo and Solono Counties.

For the Southport EIP project, the consultant for West Sacramento created a list of Tribes with interest in the area using other resources. The consultant's list contained 14 Tribes and individuals that may have interest in the project area. Letters were sent to all of the Tribes and Individuals on both of the lists. Because of this, if a Tribe or individual responded to the Corps' inquiry of interest about one project the Corps would always provide information about the other because the Southport EIP was part of the larger West Sac GRR. I explain this because the timeline for Tribal consultaion for the West Sacramento GRR project and the Southport EIP 408 are intertwined and both projects were explained while the Corps consulted. References to the Southport EIP are listed in the Consultation Record for the West Sac GRR.

| Phone Call | Letter | Email | Site Visit | Meeting | Other | Date      | From/To   | Subject  | Response |
|------------|--------|-------|------------|---------|-------|-----------|---|--|----------|
|            |        |       |            |         | X     | 5/1/2010  |   | Record Search for West Sacramento GRR APE was conducted at the California Historical Resources Information Service, Sonoma State University by the Corps |          |
|            |        |       |            |         |       | 7/10/2012 | Letter from the Army Corps of Engineers, Sacramento District (Corps) to the California State Historic Preservation Officer (SHPO) | Initiating Consultaion, defining APE, request for meeting for the Southport Early Implementation Project (EIP)   |          |

|  |   |   |  |  |   |           |  |  |   |
|--|---|---|--|--|---|-----------|--|--|---|
|  | x |   |  |  |   | 4/17/2013 | Letters to Yocha Dehe Wintun Nation, Cortina Band of Wintun Indian, Buena Vista Rancheria of Me-Wuk Indians, Enterprise Rancheria of Maidu Indians, Ione Band of Miwok Indians, Shingle Springs Band of Miwok Indian, Wilton Rancheria, Jackson Rancheria of Me-Wuk Indians, United Auburn Indian Community, Chicken Ranch Rancheria of Me-Wuk Indians, Cahil DeHe Band of Wintun Indians, Tsi-Akim Maidu, Wintun Environmental Agency, Rose Enos, | Initiation of with Tribes and individuals who may have interest in consultation for Southport Project EIP  |   |
|  |   |   |  |  |   | 4/26/2013 | United Auburn Indian Community (UAIC) Marcos Guererro to the Corps   | UAIC requests copies of cultural resources reports that were conducted for the Project Area.   |   |
|  | X |   |  |  |   | 5/3/2013  | Letter from the Wilton Rancheria (Steve Hutchason) to the Corps for Southport Project  | Wilton Rancheria requested a copy of all cultural resources reports for the Southport EIP  | Mr. Hutchason was emailed by the Corps to let him know that no cultural resources reports had been written for the project. |
|  | x |   |  |  |   | 5/9/2013  | Letter from the United Auburn Indian Community (the UAIC) to the Corps for the Southport Project   | The UAIC requested a site visit of the project area, any reports from any cultural resources work that had been conducted in the area, and the need to have tribal monitors during survey. |   |
|  | x |   |  |  |   | 5/17/2013 | Letter from the Yocha Dehe Wintun Nation (YDWN) Marshall McKay to the Corps for the Southport Project  | The YDWN requested the Corps to schedule a site visit to the project area.   |   |
|  |   |   |  |  | x | 6/6/2013  | From the Native American Heritage Commission (NAHC) to the Corps   | Received updated NAHC list of Tribal Contacts  |   |
|  |   | X |  |  |   | 7/8/2013  | From the Corps (Shellie Sullo) to the YDWN (Marilyn Delgado)   | The Corps provided Ms. Delgado with the Southport EIP PA.  |   |

|  |  |   |   |  |  |           |  |  |  |
|--|--|---|---|--|--|-----------|--|--|--|
|  |  |   |   |  |  | 7/8/2013  | The Corps (Shellie Sullo)to UAIC ( Marcos Guererro)          | The Corps provides the Draft Southport PA to UAIC  |  |
|  |  | x |   |  |  | 7/8/2013  | From the Corps (Shellie Sullo) to the UAIC (Marcos Guererro) | An e-mail was written Mr. Guererro to request dates of his availability for a site visit.  |  |
|  |  |   |   |  |  | 7/8/2013  | UAIC (Marcos Guererro) to the Corps                          | Provides dates available for a Site visit to West Sac GRR and Southport 408 project.   |  |
|  |  | x |   |  |  | 7/12/2013 | From YDWN (James Sarmento) to the Corps                      | An email was written by Mr. Sarmento to introduce himself to the Corps and requested information from the Corps to familiarize himself with the project.   |  |
|  |  | x |   |  |  | 7/22/2013 | The Corps to UAIC ( Marcos Guererro)                         | The Corps confirms meeting place and time for site visit for West Sacramento/Southport EIP project. August 6th.  |  |
|  |  | x |   |  |  | 7/26/2013 | Wilton Rancheria to the Corps (Steve Hutchason)              | Wilton Rancheria requested a site visit to the West Sacramento/Southport EIP project area.   |  |
|  |  | x |   |  |  | 8/5/2013  | UAIC (Marcos Guererro) to the Corps                          | The UAIC informs the Corps that the Wilton Rancheria (Steve Hutchison) will be attending the site visit on 8/6/2013.   |  |
|  |  |   | x |  |  | 8/6/2013  |  | Site visit of the Southport EIP and West Sac GRR APE with the Corps , City of West Sacramento, UAIC (Marcos Guererro), Wilton Rancheria (Steve Hutchason) , and ICF. YDWN was to attend but had to reschedule. |  |
|  |  |   | x |  |  | 8/20/2013 |  | Site visit of the Southport and West Sac GRR APE with the Corps, City of West Sacramento,ICF and YDWN (James Sarmento and Anthony Flores)  |  |

|   |   |   |  |   |  |           |  |  |  |
|---|---|---|--|---|--|-----------|--|--|--|
|   | X |   |  |   |  | 11/4/2013 | Corps wrote letters to YDWN, Cortina Band of Wintun Indians  | Based on the NAHC contact list, Letters were sent to the Tribes with interest specifically within the West Sac GRR APE. The letters let the Tribes know about the project, told them about the Programmatic Agreement (PA) being developed, and asked if they would like to conduct a site visit of the Area of Potential Effects (APE). |  |
|   | X |   |  |   |  | 11/4/2013 | Corps sends letter to California State Historic Preservation Office (SHPO)                         | A letter was sent to the SHPO to let them know about the project. It also told them about the Programmatic Agreement (PA) being developed and asked if they would like to conduct a site visit of the APE.   |  |
|   |   |   |  | X |  | 1/23/2014 | Corps (Shellie Sullo and Sarah Ross Arrouzet) Meeting with SHPO - Jessica Tudor and Susan Stratton | The Corps provided a copy to and discussed the West Sac Draft PA ,the project description and the APE, Also talked about the Southport 408 project and how it differed from the GRR regarding who was doing the work.  |  |
| X |   | X |  |   |  | 2/11/2014 | Corps call to Buena Vista Rancheria and e-mail   | Discussion between the Corps and Buena Vista Rancheria( Roselynn Lwenya) via telephone and followed up with an e-mail from the Corps to Buena Vista Rancheria. The Buena Vista defer to the YDWN regarding consultation for this project. But would like to review the Final PA for the West Sac GRR.                                    |  |
|   |   | x |  |   |  | 4/14/2014 | Corps (Shellie Sullo) e-mail to and from SHPO office (Jessica Tudor)                               | The SHPO asked for clarification regarding proposed alternatives and for a WORD version of the PA.   |  |

|   |  |   |  |   |  |           |   |   |  |
|---|--|---|--|---|--|-----------|---|---|--|
|   |  | x |  |   |  | 5/15/2014 | SHPO's office (Jessica Tudor) e-mailed the Corps (Shellie Sullo)  | SHPO had reviewed and had some comments on the Draft PA. SHPO asked for a WORD version of the Draft Historic Properties Management Plan. The SHPO says they required additional time to let an architectural reviewer look at the PA and HPMP.  |  |
|   |  |   |  | x |  | 6/27/2014 | Corps met with SHPO (Jessica Tudor and Kathleen Forrest ) at OHP  | The Corps and the SHPO discussed the comments that were made by SHPO regarding the PA and how the SHPO would like the comments to be resolved.  |  |
| X |  |   |  |   |  | 6/26/2014 | The Corps (Shellie Sullo) talks to the Yocha Dehe (James Sarmento) about the Southport 408 project and the West Sac GRR | The Corps and the representative from the Yocha Dehe discuss the Southport EIP and the west Sac GRR projects in Yolo County, West Sacramento. The West Sacramento 408 project was also in the process of being reviewed by the Yocha Dehe. The Yocha Dehe requested the Draft PA and HPMP for the Southport EIP |  |
| X |  |   |  |   |  | 6/30/2014 | The Corps calls UAIC and Wilton Rancheria (Hutchason)   | The Corps called the UAIC and Wilton Rancheria to determine continued interest in the West Sac and Southport EIP projects. Wilton Rancheria defers to the Yocha Dehe  |  |
|   |  | x |  |   |  | 7/1/2014  | UAIC to the Corps   | An e-mail for UAIC "The UAIC defers all consultation for this project to Yocha Dehe".   |  |
|   |  | x |  |   |  | 7/2/2014  | Corps provided the Draft PA and HPMP to the YDWN (James Sarmento) and Wilton Rancheria (Steve Hutchason)                | The Draft PA and HPMP were provided to members of the Cultural Resources staff of the YDWN and Wilton Rancheria for their review. An invitation for a field visit was offered at this time.   |  |



|  |   |   |   |  |  |           |  |   |  |
|--|---|---|---|--|--|-----------|--|---|--|
|  |   | X |   |  |  | 7/3/2014  | James Sarmento (YDWN) requests a Site Visit of the Project area with the Corps   | In an e-mail, James Sarmento request to schedule a site visit of both the West Sac GRR and the Southport 408 footprint, Mr. Sarmento offers a dates of availability.  | Ms. Sullo provides an reply on 7/3 that she will schedule the meeting including necessary personnel. |
|  | X |   |   |  |  | 7/7/2014  | The Corps sends a letter to the YDWN, Wilton Rancheria, and Cortina Band of Wintun Indians   | After informal conversations via e-mail and telephone between the Corps and the Tribes the Corps sent official correspondence asking if the Tribes would like to participate in developing the PA and the HPMP. |  |
|  | X |   |   |  |  | 7/7/2014  | The Corps sends a letter to the Advisory Council on Historic Preservation requesting their participation in developing the PA and the HPMP | The Corps asks if the Advisory Council would like to participate in developing the West Sac GRR PA and HPMP.  |  |
|  |   | x |   |  |  | 7/17/2014 | The City of West Sacramento's Flood Risk Manager (Greg Fabun) to the Corps   | Greg Fabun requests a copy of the Draft PA and HPMP   | Ms Sullo provides copies of the Draft PA and HPMP on the same day.                                   |
|  |   |   | X |  |  | 8/5/2014  | The Corps, and WSFACA conduct a site visit with James Sarmento and Anthony Flores of the YDWN  | The site visit included the footprint of both the Southport 408 project and the West Sac GRR project.   |  |
|  |   |   | X |  |  | 8/13/2014 | Corps Fieldtrip with SHPO (Jessica Tudor) for ARCF and West Sac GRR footprint  | The Corps Cultural resources leads for American River Common Features (Melissa Montag)and the West Sacramento GRR (Shellie Sullo) toured both project APEs with a representative from the SHPO's office.        |  |
|  | X | x |   |  |  | 8/18/2014 | The Advisory Council replies to the Corps request for participation in development of the PA and HPMP                                      | The Advisory Council chose to not participate in the development of the PA and HPMP.  |  |

|   |  |   |  |  |  |           |   |  |  |
|---|--|---|--|--|--|-----------|---|--|--|
|   |  | X |  |  |  | 8/19/2014 | Anthony Flores (YDWN Tribal Monitor) to the Corps requesting information.             | Mr. Flores requested a site form that was mentioned in our meeting and a copy of the map with the archaeological site locations.   | Ms Sullo provides these references on 8/20 |
|   |  | x |  |  |  | 9/16/2014 | The YDWN (James Sarmento) to the Corps  | The YDWN provides the corps a map with areas of concern within the footprint of the West Sac GRR and the Southport EIP. YDWN would recommend that there be Tribal monitors in these areas during construction.   |  |
| x |  |   |  |  |  | 3/17/2015 | The Corps talked with YDWN (James Sarmento) via phone and followed up with and e-mail | Corps provides YDWN the Southport EIP PA and HPMP and inquires when the Tribe could meet for a site visit of Southport and west Sac Footprint.   |  |
|   |  | x |  |  |  | 3/31/2015 | The YDWN (James Sarmento) to the Corps  | An e-mail from the YDWN to the Corps requesting a meeting at the YDWN offices to discuss the West Sac GRR and the Southport EIP.   |  |
|   |  | X |  |  |  | 3/10/2015 | The Corps resubmits the PA and HPMP to the SHPO office and to the YDWN                | Revised PA and HPMP incorporating the SHPO's and the Corp's Office of Counsel's comments.  |  |
|   |  | X |  |  |  | 4/8/2015  | email between The Corps(Sullo) and the YDWN (Sarmento)                                | Coordination for meeting at the YDWN Offices and the Corps asking for comments on both West Sacramento projects PAs and HPMPs.   |  |
| X |  |   |  |  |  | 5/6/2015  | Call with the Sacramento District Tribal Liaison (Mark Gilfillan)                     | Mark Gilfillan had called the YDWN (Sarmento) on 5/6/2015 to discuss concerns about the Southport EIP PA and the West Sac GRR PA. Gilfillan provided the list of concerns to Shellie Sullo for her to address in a formal response to the YDWN at their scheduled meeting. |  |
|   |  | X |  |  |  | 5/19/2015 | YDWN to the Corps   | James Sarmento send formal comments regarding the Southport EIP PA and Hemp with concerns about the documents.   |  |

|  |  |   |  |   |  |           |  |   |   |
|--|--|---|--|---|--|-----------|--|---|---|
|  |  | X |  |   |  | 5/20/2015 | Corps to YDWN  | Shellie Sullo asks James Sarmiento if his comment for the West Sac GRR PA and HPMP would be similar to those the YDWN provided for the Southport EIP.   | James Sarmiento wrote that he imagined that the comments would be similar to the Southport EIP but would have formal comments to the Corps the next week. |
|  |  |   |  | X |  | 6/18/2015 | Corps Meets with YDWN at YDWN offices                            | Topics of Discussion Southport EIP and West Sacramento GRR PAs and HPMPs, and Village Expressway 408. The full array of alternatives were discussed for the projects, the potential for impact to cultural resources, and a discussion of the comments that the YDWN provided the Corps regarding the PAs and HPMPs |   |
|  |  | X |  |   |  | 6/19/2015 | Corps Tribal Liaison to YDWN                                     | The Corps provided response to the YDWN comments of concern for the West Sac and Southport projects.  |   |
|  |  | x |  |   |  | 7/9/2015  | SHPO's office (Jessica Tudor) e-mailed the Corps (Shellie Sullo) | The SHPO office provided comments on the draft PA - not the HPMP.   |   |
|  |  | X |  |   |  | 7/15/2015 | The Corps provides the SHPO with the Draft PA                    | The Corps incorporated the comments received from the SHPO into the Draft PA and sends it back to SHPO for review.  |   |

|   |  |   |  |   |  |           |  |   |  |
|---|--|---|--|---|--|-----------|--|---|--|
|   |  | X |  |   |  | 7/27/2015 | UAIC (Guerrero) Contacts the Corps(Sullo)            | the UAIC contacted the Corps to reengage with consultations although they had deferred all consultations to the Yocha Dehe for both west Sacramento Projects. The UAIC requested to know the project schedules, copies of the EIS, the PA and HPMP for both projects, all cultural resources reports that were written for the project (none) a copy of the records search, to be a signatory to the PAs and a visit to the projects APE. The SHPO was cc'd on most of the e-mails. |  |
|   |  | X |  |   |  | 7/31/2015 | Corps to the UAIC                                    | Ms. Sullo provided UAIC THPO, Jason Camp, with the Southport PA and the West Sac GRR PS///Jason Camp replies that Marcos Guerrero could be the UAIC's point of contact for this matter.   |  |
|   |  | X |  |   |  | 8/4/2015  | UAIC to SHPO (Anmarie Medin and the Corps            | UAIC states that although the UAIC had deferred all consultation for the Southport EIP and the West Sac GRR to the YDWN last year, they are now interested in reinitiating consultation on these projects.  |  |
|   |  | x |  |   |  | 8/7/2015  | UAIC requests a meeting with the Corps               | UAIC e-mailed the corps to request a meeting to discuss the comments that the UAIC had regarding the Southport and west Sac EISs  |  |
|   |  | X |  |   |  | 8/10/2015 | UAIC to the Corps                                    | UAIC (Guererro) sends e-mail to the corps with possible mitigation measures for WSAFCA,, GRR and Southport.   |  |
| X |  |   |  | X |  | 8/25/2015 | Teleconference between the UAIC, YDWN, and the Corps | UAIC, YDWN, and the Corps discuss the comments sent on 8/10/2015 - discuss setting up a site visit to the West Sac GRR and Southport APE.   |  |

**West Sacramento GRR**  
**EIS Cultural Resources Appendix**  
**Enclosure 3**  
Consultation with the SHPO



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**U.S. ARMY ENGINEER DISTRICT, SACRAMENTO**  
**CORPS OF ENGINEERS**  
1325 J STREET  
SACRAMENTO, CALIFORNIA, 95814-2922

Environmental Resources Branch

Carol Roland-Nawi, Ph.D.  
State Historic Preservation Officer  
Office of Historic Preservation  
1725 23rd Street, Suite 100  
Sacramento, CA 95816

Dear Ms. Roland-Nawi:

The United States Army Corps of Engineers (Corps) is pursuing the West Sacramento General Reevaluation Report ("West Sacramento GRR" or "Project"), which consists of flood risk improvements to the City of West Sacramento's north and south basins as shown in Figure 1 (enclosed).

The study authority for the West Sacramento area was provided through Section 209 of the Flood Control Act of 1962 (Public Law 87-874). Specific project authority was provided in Section 101(4) of the Water Resources Development Act (WRDA) of 1992. This authorization was revised and supplemented through the Energy and Water Development Appropriations Act (EWDAA) of 1999 (Public Law 105-245). The authorization was later revised and supplemented through the Energy and Water Development Appropriations Act of 2010 (Public Law 111-85).

This Project will allow the Corps to improve the level of flood risk management for the City of West Sacramento in Yolo County. Because these improvements qualify as undertakings, compliance with Section 106 of the National Historic Preservation Act (NHPA, 16 US Code Section 470f) is required. This letter initiates consultation with your office pursuant to 36 CFR Part 800.3(c)(3).

The Project will occur in multiple phases over many years. Because of the nature of this phased approach, it is not practicable to complete the usual Section 106 process in advance of construction. The Corps is proposing the use of a programmatic agreement (PA) (enclosed) that would provide for phasing of the Section 106 process as authorized in 36 CFR Part 800.4(b) (2). The stipulations of the PA would require the Corps to perform the following steps for each construction phase or ancillary activity that is part of the larger Project:

- a. Define an area of potential effects (APE), in consultation with your office.

- b. Complete an inventory of each phase-specific APE.
- c. Evaluate identified resources and prepare findings of effect.
- d. Develop and implement treatment where necessary to resolve adverse effects.
- e. Provide reports to your office and other consulting parties, documenting these steps, subject to your approval.
- f. Provide guidance on inadvertent discoveries, objections to the PA, amendments, and dispute resolution.

The Corps will collaborate with signatories and consulting parties to develop a historic property management plan as a framework to manage the overall proposed cultural resource work and then a historic property treatment plan for all technical work to be completed under the PA. The plan will provide technical standards and methods necessary to implement the Section 106 process defined in the PA, and will serve as attachments to the PA, providing details that cannot be succinctly incorporated into the PA itself.

The Corps requests that you review and provide comments for the attached PA. If you have any questions or comments, please contact Ms. Shellie Sullo, Social Science Study Manager, at (916) 557-7628 or by email at: [shellie.sullo@usace.army.mil](mailto:shellie.sullo@usace.army.mil). Project specific questions should be directed to Cameron Sessions, Project Manager, at (916) 557-7896 or by email: [Cameron.l.sessions@usace.army.mil](mailto:Cameron.l.sessions@usace.army.mil).

Sincerely,



 Alicia E. Kirchner  
Chief, Planning Division

Enclosure

**West Sacramento GRR**  
**EIS Cultural Resources Appendix**  
**Enclosure 4**  
Consultation with the ACHP





DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
1325 J STREET  
SACRAMENTO, CALIFORNIA 95814

REPLY TO  
ATTENTION OF

Environmental Resources Branch

JUL 07 2014

Mr. Reid Nelson  
Advisory Council on Historic Preservation  
Office of Federal Agency Programs  
Old Post Office Building  
1100 Pennsylvania Avenue, NW, Suite 803  
Washington, D.C. 20004

Dear Mr. Nelson:

We are writing in accordance with Section 106 of the National Historic Preservation Act of 1966 to inform you of the West Sacramento, California General Reevaluation Report ("West Sac GRR Project" or "Project") and to invite your participation in the Section 106 process (36 CFR § 800.2[b][1]). The initial study authority for the West Sacramento area was provided through Section 209 of the Flood Control Act of 1962, Public Law (PL) 87-874. The West Sac GRR Project was authorized in the Water Resources Development Act of 1992, PL 102-580 Sec. 101 (4), as amended by the Energy and Water Development of 1999, PL 105-245.

The U.S. Army Corps of Engineers (Corps) is undertaking the Project in partnership with its non-Federal sponsors, the West Sacramento Area Flood Control Agency (WSAFCA), and the Central Valley Flood Protection Board (CVFPB). This Project consists of flood risk reduction to the City of West Sacramento's north and south basins as shown in an Area of Potential Effect Map (APE), (Enclosure 1).

The West Sac GRR Project includes area that would benefit from proposed levee improvements, including the city of West Sacramento itself, and the lands within WSAFCA's boundaries, which encompass portions of the Sacramento River, the Yolo Bypass, the Sacramento Bypass, and the Sacramento Deep Water Ship Channel (DWSC). The proposed levee improvements would address seepage, slope stability, overtopping, and erosion concerns. The flood risk management system associated with these waterways consists of over 50 miles of levees in Reclamation District (RD) 900, RD 537, California Department of Water Resources' Maintenance Area 4, and the DWSC, that surround the city.

The Corps determined that it will not be possible to fully determine effects on historic properties prior to approval of the undertaking (36 CFR § 800.14[b][1][ii]). Therefore, the Corps intends to develop a programmatic agreement (PA) including your office, should you choose to participate, the State Historic Preservation Office, WSAFCA, and the CVFPB (36 CFR § 800.14[b][2]). In the course of developing the PA, the Corps will consult with the local sponsors, the Yocha Dehe Wintun Nation, the Wilton Rancheria, and interested Native American tribes.

Please find enclosed the Draft PA and the Draft Historic Properties Management Plan, which contains a description of the APE and the Project (Enclosures 2 and 3). Please provide comments on the PA and HPMP if you choose to participate within 30 calendar days of receipt of this letter. If you have any questions or comments please contact Ms. Shellie Sullo, Social Science Study Manager, U.S. Army Corps of Engineers Sacramento District, 1325 J Street, Sacramento, California 95814-2922. If you have any questions or would like additional information, please contact Ms. Sullo at (916) 557-7628 or by email at [shellie.sullo@usace.army.mil](mailto:shellie.sullo@usace.army.mil).

Sincerely,

A handwritten signature in black ink, appearing to read 'Alicia E. Kirchner', with a stylized, flowing script.

Alicia E. Kirchner  
Chief, Planning Division

Enclosures

**West Sacramento GRR**  
**EIS Cultural Resources Appendix**  
**Enclosure 5**

Consultation with American Indian Tribes and Individuals



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO, CALIFORNIA, 95814-2922

Environmental Resources Branch

**JUL 07 2014**

Andrew Franklin  
Chairperson  
Wilton Rancheria  
9300 W. Stockton Blvd.  
Suite 200  
Elk Grove, CA 95758

Dear Mr. Franklin:

We are writing in accordance with Section 106 of the National Historic Preservation Act of 1966 to inform you of the West Sacramento, California General Reevaluation Report ("West Sac GRR Project" or "Project") and to invite your participation in the Section 106 process. The initial study authority for the West Sacramento area was provided through Section 209 of the Flood Control Act of 1962, Public Law (PL) 87-874. The West Sac GRR Project was authorized in the Water Resources Development Act of 1992, PL 102-580 Sec. 101 (4), as amended by the Energy and Water Development of 1999, PL 105-245.

The U.S. Army Corps of Engineers (Corps) is undertaking the Project in partnership with its non-Federal sponsors, the West Sacramento Area Flood Control Agency (WSAFCA), and the Central Valley Flood Protection Board (CVFPB). This Project consists of flood risk management to the City of West Sacramento's north and south basins as shown in Enclosure 1: Area of Potential Effect Map (APE), which is enclosed.

The West Sac GRR Project includes area that would benefit from proposed levee improvements, including the city of West Sacramento itself, and the lands within WSAFCA's boundaries, which encompass portions of the Sacramento River, the Yolo Bypass, the Sacramento Bypass, and the Sacramento Deep Water Ship Channel (DWSC). The proposed levee improvements would address seepage, slope stability, overtopping, and erosion concerns. The flood risk management system associated with these waterways consists of over 50 miles of levees in Reclamation District (RD) 900, RD 537, California Department of Water Resources' Maintenance Area 4, and the DWSC, that completely surround the city.

We contacted the Native American Heritage Commission, who provided your name as being potentially interested in our proposed project. We are sensitive to traditional cultural properties and sacred sites, and make every effort to avoid them. Please let us know if you have knowledge of locations of archeological sites, or areas of traditional cultural value or concern in or near the West Sac GRR APE.

During previous discussions with your Executive Director of Environmental Resources, Steven Hutchason, about another project in the West Sacramento area (Southport 408), the larger West Sac GRR project was described. Mr. Hutchason asked that the Wilton Rancheria be informed as this Project progressed.

The Corps has determined that it will not be possible to fully determine the effects on historic properties prior to approval of the Project. Therefore, In accordance with (36 CFR § 800.14[b][1][ii]) the Corps is in the process of developing a Programmatic Agreement (PA) that would include the Wilton Rancheria, should you wish to participate as a concurring party. In the course of developing the PA we are also developing a Historic Properties Management Plan (HPMP) to guide the implementation of the PA. We have enclosed the PA and HPMP for your review and comment (Enclosures 2 and 3).

We ask that you review the PA and HPMP and provide your comments within 30 calendar days of receipt of this letter. If you have any questions or would like additional information, please contact Ms. Shellie Sullo, Social Science Study Manager, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, California 95814-2922. Ms. Sullo can also be reached by phone at: (916) 557-7682 or by e-mail at: [shellie.sullo@usace.army.mil](mailto:shellie.sullo@usace.army.mil). Project specific questions should be directed to Byron Lake, Project Manager. Mr. Lake can be reached by e-mail at: [bryon.l.lake@usace.army.mil](mailto:bryon.l.lake@usace.army.mil), or by phone at (916) 557-7890.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alicia E. Kirchner', with a long, sweeping horizontal line extending to the right.

Alicia E. Kirchner  
Chief, Planning Division

Enclosure



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO, CALIFORNIA, 95814-2922

Environmental Resources Branch

**JUL 07 2014**

Marshall McKay, Chairperson  
Yocha Dehe Wintun Nation  
PO Box 18  
Brooks, CA 95606

Dear Mr. McKay:

We are writing in accordance with Section 106 of the National Historic Preservation Act of 1966 to inform you of the West Sacramento, California General Reevaluation Report ("West Sac GRR Project" or "Project") and to invite your participation in the Section 106 process. The initial study authority for the West Sacramento area was provided through Section 209 of the Flood Control Act of 1962, Public Law (PL) 87-874. The West Sac GRR Project was authorized in the Water Resources Development Act of 1992, PL 102-580 Sec. 101 (4), as amended by the Energy and Water Development of 1999, PL 105-245.

The U.S. Army Corps of Engineers (Corps) is undertaking the Project in partnership with its non-Federal sponsors, the West Sacramento Area Flood Control Agency (WSAFCA), and the Central Valley Flood Protection Board (CVFPB). This Project consists of flood risk management to the City of West Sacramento's north and south basins as shown in Enclosure 1: Area of Potential Effect Map (APE), which is enclosed.

The West Sac GRR Project includes area that would benefit from proposed levee improvements, including the city of West Sacramento itself, and the lands within WSAFCA's boundaries, which encompass portions of the Sacramento River, the Yolo Bypass, the Sacramento Bypass, and the Sacramento Deep Water Ship Channel (DWSC). The proposed levee improvements would address seepage, slope stability, overtopping, and erosion concerns. The flood risk management system associated with these waterways consists of over 50 miles of levees in Reclamation District (RD) 900, RD 537, California Department of Water Resources' Maintenance Area 4, and the DWSC, that completely surround the city.

We contacted the Native American Heritage Commission, who provided your name as being potentially interested in our proposed project. We are sensitive to traditional cultural properties and sacred sites, and make every effort to avoid them. Please let us

know if you have knowledge of locations of archeological sites, or areas of traditional cultural value or concern in or near the West Sac GRR APE.

During previous discussions with your Tribal Historic Preservation Officer, James Sarmento, about another project in the West Sacramento area (Southport 408), the larger West Sac GRR project was described. Mr. Sarmento asked that the Yocha Dehe be informed as this Project progressed.

The Corps has determined that it will not be possible to fully determine the effects on historic properties prior to approval of the Project. Therefore, In accordance with (36 CFR § 800.14[b][1][ii]) the Corps is in the process of developing a Programmatic Agreement (PA) that would include the Yocha Dehe Wintun Nation, should you wish to participate as a concurring party. In the course of developing the PA we are also developing a Historic Properties Management Plan (HPMP) to guide the implementation of the PA. We have enclosed the PA and HPMP for your review and comment (Enclosures 2 and 3).

We ask that you review the PA and HPMP and provide your comments within 30 calendar days of receipt of this letter. If you have any questions or would like additional information, please contact Ms. Shellie Sullo, Social Science Study Manager, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, California 95814-2922. Ms. Sullo can also be reached by phone at: (916) 557-7682 or by e-mail at: [shellie.sullo@usace.army.mil](mailto:shellie.sullo@usace.army.mil). Project specific questions should be directed to Byron Lake, Project Manager. Mr. Lake can be reached by e-mail at: [byron.l.lake@usace.army.mil](mailto:byron.l.lake@usace.army.mil), or by phone at (916) 557-7890.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alicia E. Kirchner', written in a cursive style.

Alicia E. Kirchner  
Chief, Planning Division

Enclosure